

## Next generation seasonal to decadal prediction at GFDL using SPEAR

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We describe the recently developed next generation system for seasonal to decadal predictions at GFDL, called SPEAR (Seamless system for Prediction and EArth system Research). This model takes advantage of recent advancements in component models and initialization techniques at GFDL, and will soon become GFDL's contribution to the real-time NMME seasonal prediction system. This will also be used for initialized decadal predictions, as well as ensembles of multidecadal projections.

This seamless prediction system on seasonal to multidecadal time scales is well suited to approach the topic of multi-annual predictability. We will review initial results on predictions and predictability from this new system, with a focus on multi-annual time scales. The role of the initialization system will be emphasized, as will the underlying processes that can lead to predictability on longer than seasonal time scales. We will discuss possible approaches for furthering prospects in multi-annual predictions.